Creating Tactile Maps for the Blind using a GIS

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Abstract

Tactile maps are sometimes used to help orient blind students to school and college campuses. Often the maps are hand-made with poster board cut-outs, representing buildings or obstacles, pasted on cardboard and annotated with braille. Sometimes the maps are derived from photocopies of site maps and are tactilely-enhanced using micro-encapsulated paper and a Stereocopier machine that "puffs up" the darkened lines and symbols. An alternative approach described in this paper is to use a GIS (geographic information system) and coordinate digitizer. Relevant spatial information is organized into layers that can be selected and combined according to need, then printed on micro-encapsulated paper to provide students with a series of customized maps.